

Serial No. 10/566,881
Art Unit 2611

PU030249
Customer No. 24498

Remarks

Applicants have carefully reviewed the Official action mailed June 14, 2010. To better point out and claim their invention, applicants have amended claims 1, 11, and 32. Applicants acknowledge the examiner's willingness to allow claims 12-31. Further applicants acknowledge the examiner's willingness to allow claims 7-10 if re-written in independent form. To that end, applicants have amended claim 7 to incorporate the limitations of claim 1 and have amended claims 9 and 10 to now depend from claim 7. Following the amendments, claims 1-32 remain in this application.

Objection to Claims 1-11

The examiner has objected to claims 1 and 11 because the lack of any hardware recitation. Applicants have amended claims 1 and 11 to recite decoding the video stream in a video decoder. As amended claims 1 and 11 and dependent claims 2-10 no satisfy the "machine" prong of the "machine or transformation" test to place these claims within the safe harbor for purposes of satisfying 35 U.S.C. §101.

35 U.S.C. § 112 Rejection of Claim 32

Claim 32 stands rejected under 35 U.S.C. § 112, second paragraph, as failing to clearly point out and claim what applicants regard as their invention. In particular, the examiner contends that the recitation at line 8 of the claim regarding "at least one pixel in the picture" lacks clarity in view of the different types of pictures referred to in the claim.

To better point out and claim their invention, applicants have amended claim 32 to now recite

a noise generator noise for generating noise for addition to at least one pixel in a decoded picture in an amount correlated to additive noise of at least one pixel in the at least one previously decoded picture;

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Thus, claim 32 now more fully defines the picture whose noise is correlated with the noise generated by the noise generator. As amended claim 32 fully complies with 35 U.S.C. § 112 and applicants request withdrawal of the rejection of claim 32.

35 U.S.C. § 102(b) Rejection of Claims 1-4 and 11

Claims 1-4 and 11 stand rejected under 35 U.S.C. § 102(b) as anticipated by US Published Patent Application 2002/0061062 to Royal O'Brien. Applicants respectfully traverse this rejection.

The O'Brien published application describes a technique for filtering decompressed image information to remove artifacts and distortion and thereby improve the appearance of the displayed image. Paragraph [0015] of the O'Brien published application best describes the inventive filtering technique:

A filter, according to the present invention, preferably compares the difference in hue between selected pixels along the edge of the blocks against corresponding pixels of an adjacent block. The absolute value of the difference is evaluated against an established threshold to determine whether to perform correction. Should correction be required, the filter calculates weighted hue values for both the selected pixel and the compared pixel to be inserted into the sub-macroblock before presentation. As such, the filter preferably reduces the "mosaic" effect and removes noise artifacts.

In rejecting applicants' claims 1 and 11, the examiner contends that O'Brien teaches applicants' step of adding noise to at least one pixel in a picture in the video stream following decoding in an amount correlated to additive noise of at least one other pixel in the picture. In support of that assertion, the examiner implicitly argues that the absolute value of the difference in hue for the selected and compared pixels, as taught by O'Brien, constitutes noise. Applicants' respectfully disagree.

Wikipedia, the on-line encyclopedia, defines electronic noise as follows:

Electronic noise is a random fluctuation in an electrical signal, a characteristic of all electronic circuits. Noise generated by electronic devices varies greatly, as it can be produced by several different effects. Thermal and shot noise are unavoidable and due to the laws of nature, rather than to the device exhibiting them, while other types depend mostly on manufacturing quality and semiconductor defects.

In communication systems, the noise is an error or undesired random disturbance of a useful information signal, introduced before or after the detector and decoder. The noise is a summation of unwanted or disturbing energy from natural and sometimes man-made sources. [http://en.wikipedia.org/wiki/Noise_\(electronics\)](http://en.wikipedia.org/wiki/Noise_(electronics))

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The difference in hue information calculated by O'Brien does not constitute "noise" as recited in applicant's claims 1 and 11 and claims 2-4. The hue information described by O'Brien constitutes a useful information signal, not the random disturbance or fluctuation thereof. Thus, the difference in hue information likewise does not constitute a random disturbance, and thus does not constitute noise.

Simply stated, the O'Brien published application does not generate noise, let alone, add noise in an amount correlated to the noise in a prior picture (claim 1) or to the additive noise of another pixel in the picture (claim 11). To the extent that the O'Brien published application mentions noise, it does so in the context of noise removal or noise filtering, not in the context of adding noise. Thus, the O'Brien published application does not disclose or suggest noise addition. In fact, the O'Brien published application actually teaches away from doing so. Therefore, the O'Brien application does not anticipate applicants' claims 1 and 11 and dependent claims 2-4. Applicants request withdrawal of the 35 U.S.C. § 102(b) rejection of these claims.

35 U.S.C. § 103(a) Rejection of Claims 5 and 6

Claims 5 and 6 stand rejected under 35 U.S.C. § 103(a) as obvious over the O'Brien published application discussed above, in view of U.S. Patent 5,201,836 to Childers. Applicants traverse this rejection.

Applicants' claims 5 and 6 depend from claim 1 and describe correlating noise using a Finite Impulse Response (FIR) and an Infinite Impulse Response filter, respectively. In rejecting claims 5 and 6, the examiner contends that the O'Brien published application discloses applicants' feature of adding noise correlated to the additive noise of pixels in a prior pictures. To provide the missing teaching of an impulse response filter, the examiner relies on the Childers patent.

As discussed above, the O'Brien published application does not generate noise, let alone, add noise in an amount correlated to the noise in a prior picture. To the extent that the O'Brien published application mentions noise, it does so in the context of noise removal or noise filtering, not in the context of adding noise.

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The Childers patent concerns a vector processor that incorporates an impulse response filter. However, the Childers patent does not correct the deficiencies of the O'Brien publication. In particular, the Childers patent says nothing about adding noise to correct artifacts in a video signal. Therefore, the combination of the O'Brien published application with the Childers patent would not teach all of the features of applicants' claims 5 and 6. Applicants request withdrawal of the 35 U.S.C. § 103(a) rejection of these claims.

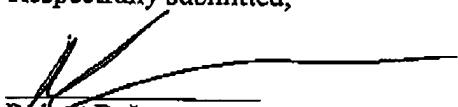
Conclusion

In view of the foregoing, applicants solicit entry of this amendment and allowance of the claims. If the Examiner cannot take such action, the Examiner should contact the applicant's attorney at (609) 734-6820 to arrange a mutually convenient date and time for a telephonic interview.

Please charge the cost of the additional independent claim and charge any fee or credit any overpayment to Deposit Account No. 07-0832.

Respectfully submitted,

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